

Remarks

The various parts of the Office Action (and other matters, if any) are discussed below under appropriate headings.

Claim Objections

Claims 2 and 12 were objected to for informalities related to the recitation of a 180 degree angle between the displays. Claims 2 and 12 have been cancelled without prejudice or disclaimer of the subject matter contained therein in an effort to expedite prosecution.

Claim Rejections - 35 USC § 102 and § 103

Independent claims 1, 16, 19 and 36 stand rejected under 35 USC §103(a) as being unpatentable over U.S. Patent No. 6,593,957 ("Christie") in view of U.S. Patent No. 5,982,343 ("Iba").

Further, independent claims 8, 10, 28, 35 and 37 stand rejected under 35 USC §103(a) as being unpatentable over Christie in view of Iba and further in view of U.S. Patent No. 4,995,718 ("Jachimowicz").

It is respectfully requested that these rejections should be withdrawn for at least the following reasons.

Each of independent claims 1, 8, 10, 16, 19, 28, 35, 36 and 37 recites a display system or display method that includes a pair of displays at an obtuse angle to each other and a beam splitter positioned relative to two displays at the bisectrix of the obtuse angle to combine images from the displays.

In rejecting each of the above-identified independent claims, the Office Action recognizes that Christie fails to disclose, in a manner like that recited in the respective independent claims, a pair of displays disposed at an obtuse angle to each other. The Office Action turns to Iba to cure the deficiencies of Christie with respect to the recitation of displays at an obtuse angle to each other. For example, at page 3, the Office Action asserts that "Iba teaches the displays (12 and 13) being at an obtuse angle to each other (the two displays are in an obtuse angle), (col. 14, lines 34-39)."

It is respectfully submitted that this reliance on Iba is misplaced. In fact, a closer reading of the cited portion of Iba states "light emitted from the two-dimensional display devices 12 and 13 passes through the half-mirrors 32 and 33. However, ***since the half-mirrors 32 and 33 are combined not at right angles, but at an obtuse angle ($\alpha=110^\circ$) . . .***" (Emphasis added). The above-quoted portion of Iba is presented in connection with FIG. 13. An annotated version of FIG. 13 is provided below for purposes of explanation.

As noted above, Iba actually discloses that half-mirrors 32 and 33 are at an

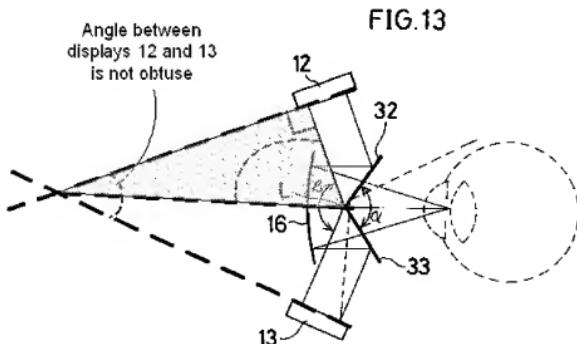


FIG.13

obtuse angle of $\alpha=110^\circ$ to one another. Further, Iba discloses that $\beta = (360^\circ - 2\alpha) = 140^\circ$. Therefore, from the shaded triangle of FIG. 13, it can be seen that $\frac{1}{2}\beta = 70^\circ$ and one-half of the angle between displays 12 and 13 is only 20° . ***Therefore, the angle between displays 12 and 13 actually is only 40° - an acute angle.***

As such, Iba fails to cure the deficiencies of Christie with respect to the claim recitation of an obtuse angle between the displays. ***If anything, Iba should be viewed as teaching away from what is recited in independent claims 1, 8, 10, 16, 19, 28,***

35, 36 and 37.¹ For at least this reason, the rejections of claims 1, 8, 10, 16, 19, 28, 35, 36 and 37 should be withdrawn.

Further, independent claims 8, 10, 16 and 19 recite that the polarization for both displays is the same. In addressing this claim element, the Office Action points to col. 9, lines 13-14 of Christie for a disclosure of pair of displays having polarization that is the same. It is respectfully submitted that ***Christie does not support this assertion.*** In fact, upon closer reading it can be seen that Christie discloses "***output polarizers of image LCDs 205r, 205l are oriented in orthogonal directions.***" (Emphasis added).

For at least this additional reason, the rejections of claims 8, 10, 16 and 19 should be withdrawn.

The respective dependent claims, while reciting further features, are not being independently discussed inasmuch as they are allowable for at least the same reasons as the independent claims from which they depend. This absence of any comment regarding the dependent claims, however, should not be construed as an acquiescence to the contentions made in the Office Action.

Independent claim 24 stands rejected under 35 USC §103(a) as being unpatentable over Christie in view of Christie's admitted prior art. It is respectfully submitted that the rejection should be withdrawn for at least the following reasons.

Claim 24 recites a display system that includes a first display having optical polarization characteristics, a second display smaller in area than the first display and having optical polarization characteristics, the second display being at an angle to the first display and a beam splitter at the bisectrix of the angle between the first and second displays.

¹ MPEP 2143.03 VI mandates that "PRIOR ART MUST BE CONSIDERED IN ITS ENTIRETY, INCLUDING DISCLOSURES THAT TEACH AWAY FROM THE CLAIMS."

MPEP 2143.03 VI goes on to instruct that "[a] prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

In rejecting claim 24, the Office Action points to col. 2, lines 11-12 of Christie for a teaching of the claimed display system including a first display having optical polarization characteristics and a second display smaller in area than the first display. Page 14 of the Office Action states that,

Christie's admitted prior art teaches a second display smaller in area than the first display (the display size, cost and complexity increases with increases in the size of the stereoscopic image). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added the adjusting the size of the displays of Christie's admitted prior art to the display system of Christie because adjusting the size of one or both displays to accommodate larger image size, (col. 2, lines 11-12).

For convenience of reference col. 2, lines 4-18, of Christie is provided below.

Other approaches to stereoscopic image presentation include so-called "volumetric" displays (which utilize a medium to fill or scan through a three-dimensional space, small volumes of which are individually addressed and illuminated), and electronic holography displays. Both of these types of display require rapid processing of enormous quantities of data, even for lower resolution images, and both have significant obstacles to overcome when the displays are scaled up to accommodate larger image sizes. In addition, the volumetric displays produce transparent images which, while suitable for applications (such as air-traffic control or scientific visualization) where the illusion of solidity is less important than a wide viewing zone, do not typically provide a fully convincing experience of three-dimensionality.

It is unclear how the above-cited portion of Christie discloses or renders obvious the claimed display system including a first display having optical polarization characteristics and a second display smaller in area than the first display. In fact, it is respectfully submitted that the rejection of claim 24 is unsupported by Christie, and should be withdrawn.

Telephone Correspondence

In the interests of advancing this application to allowance and compact prosecution, it is respectfully requested that the Examiner telephone the undersigned to discuss any of the foregoing with which there may be some controversy or confusion or to make any suggestions that the Examiner may have to place the application in condition for allowance.

Conclusion

In view of the foregoing, request is made for timely issuance of a notice of allowance.

Respectfully submitted,

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